

WHAT IS CLAIMED IS:

1. A zeolite or molecular sieve, said zeolite or molecular sieve having an AAI of at least 1.0.
2. The zeolite or molecular sieve of Claim 1 wherein said zeolite or molecular sieve has pores which have an average pore diameter greater than 100 Angstroms.
3. The zeolite or molecular sieve of Claim 1 wherein said zeolite or molecular sieve has a pore volume greater than $0.7 \text{ cm}^3/\text{g}$.
4. The zeolite or molecular sieve of claim 1 wherein silica and alumina are present in a silica to alumina molar ratio of at least 6:1.
5. The zeolite of claim 4 wherein the zeolite is selected from the group consisting of beta, TEA-mordenite, TEA-ZSM-12, MCM-22, PSH-3, ZSM-5, TPA-5, Breck 6.
6. The zeolite of claim 4 wherein the zeolite is produced using an organo-nitrogen directing agent.
7. The zeolite of claim 6 wherein the silica to alumina molar ratio is at least 15:1.
8. A process for converting a chemical, comprising:
effecting said conversion in the presence of a catalyst comprising the zeolite or molecular sieve of claim 1.
9. The process of claim 8 wherein the conversion is an aromatic alkylation.
10. The process of claim 9 wherein the zeolite is selected from the group consisting of zeolite beta, MCM-22 and PSH-3.
11. The process of claim 8 wherein the conversion is hydroisomerization.
12. The process of claim 8 wherein the conversion is hydrocracking.
13. The process of claim 8 wherein the conversion is the removal of nitrogen oxide.
14. The process of claim 8 wherein the zeolite is the zeolite of claim 2.

15. The process of claim 8 wherein the zeolite is the zeolite of claim 3.
16. The process of claim 8 wherein the zeolite is the zeolite of claim 4.
17. The process of claim 8 wherein the zeolite is the zeolite of claim 5.
18. In a process for producing a zeolite or molecular sieve wherein said process includes removal of an organic templating agent, the improvement comprising:
removing said templating agent at a temperature of no greater than 550°C and under conditions wherein after the removal of the templating agent, said zeolite or molecular sieve has an AAI of at least 1.0.
19. The process of claim 18 wherein at least 50% of the templating agent is removed.
20. The process of claim 19 wherein the zeolite is selected from the group consisting of beta, TEA-mordenite, TEA-ZSM-12, MCM-22, PSH-3, ZSM-5, TPA-5, Breck 6.
21. The process of claim 19 wherein the heating is in a bed in which heating is controlled to prevent a temperature variation in the bed of more than 25°C from the average bed temperature.
22. The process of claim 21 wherein the heating rate is less than 10°C/min.
23. The process of Claim 18 wherein after removal of the templating agent, said zeolite or molecular sieve has pores which have an average pore diameter of greater than 100 Angstroms.
24. The process of Claim 18 wherein after removal of the templating agent said zeolite or molecular sieve has a pore volume greater than 0.7 cm³/g.